UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,087	08/21/2003	Alan Warwick	13768.433	7259

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FRITZ, BRADFORD F

ART UNIT	PAPER NUMBER
2442	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/645,087	WARWICK ET AL.
	Examiner	Art Unit	
	BRADFORD F. FRITZ	2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _03 February 2009_.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-33 and 35-37_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-33 and 35-37_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _8/12/08_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20090519

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, filed 2/03/09, with respect to the rejection(s) of claim(s) 1-

33 and 35-37 have been fully considered and are persuasive. Therefore, the rejection

has been withdrawn. However, upon further consideration, a new ground(s) of rejection

is made in view of over Lamb (6,892,264), Iwami (2002/0156867), Thrasher

(7,275,103), Chadalapaka (6,845,403), and Kuik (7,165,258).

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-8, 10-22, and 24-31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lamb (6,892,264) in view of Iwami (2002/0156867), further in view of

Thrasher (7,275,103).

4.   Regarding claims 1 and 15, Lamb disclosed an act of identifying a set of the one

or more devices that can be accessed locally or over a network (column 3, lines 16-30

and column 63, lines 60-67, Fig. 1); an act of generating a target that identifies a set of

the one or more devices (column 3, lines 16-30 and column 63, lines 60-67), and that

includes at least one corresponding device identifier (column 3, lines 16-30 and column

63, lines 60-67); an act of associating client authorization information identified by the

network provider with the target that identifies set of the one or more devices (column 3,

lines 42-50 and column 63, lines 60-67).

However, Lamb does not explicitly teach wherein the set of one or more devices

is identified based on each of the devices having at least one common group of clients.

Iwami teaches wherein the set of one or more devices is identified based on each of the

devices having at least one common group of clients (paragraphs 0030-0031, 0038-

0039, 0041 and Fig. 3). It would have been obvious to one of ordinary skill in the art at

the time of the invention to include the features as taught by Iwami in the system of

Lamb because both are from the same field of endeavor and in order to allow a storage

server provider to provide restricted access to storage resources to only authorized

users or group of users (paragraph 0015, e.g. users from the same company).

However, the Lamb-Iwami combination does not teach an act of dynamically

assigning the target to a port through a protocol-independent port driver at the network

provider, such that only clients authorized by the associated client information are

allowed to access the assigned port, thereby allowing only the clients access to the set

of the one or more device through the target, wherein the assignment of the port is

dependent upon load balancing of the network provider.

Thrasher teaches an act of dynamically assigning the target to a port through a

protocol-independent port driver at the network provider (column 11, lines 27-60 and

Fig. 6), such that only clients authorized by the associated client information are allowed

to access the assigned port (column 11, lines 27-60 and Fig. 6), thereby allowing only

the clients access to the set of the one or more device through the target (column 11,

lines 27-60 and Fig. 6), wherein the assignment of the port is dependent upon load

balancing of the network provider (column 11, lines 27-60 and Fig. 6). It would have

been obvious to one of ordinary skill in the art at the time of the invention to include the

features as taught by Thrasher in the Lamb-Iwami combination because all are from the

same field of endeavor and in order to "proactively identify bottlenecks and to

reconfigure SAN pathing on the fly to improve the flow of data through the SAN"

(column 1, lines 65 – column 2, line 3)

5.   Regarding claims 2 and 16, Lamb disclosed wherein the at least one of the one

or more devices can be accessed locally through a local access protocol (column 19,

lines 20-27).

6.   Regarding claims 3 and 17, Lamb disclosed wherein the at least one of the one

or more devices is a network device that can be accessed on a network through a

network access protocol (column 19, lines 20-27).

7.   Regarding claims 4 and 18, Lamb disclosed wherein the act of identifying one or

more devices further includes an act of creating one or more devices that can be

accessed over the network (column 19, lines 20-27 and Fig. 1).

8.   Regarding claims 5 and 19, Lamb disclosed wherein the act of creating one or

more devices includes an act of identifying a at least one of a partition and file (column

63, lines 5-25 and column 74, lines 1-14), wherein the at least one of a partition and file

represents at least a portion of one of the one or more devices (column 63, lines 5-25

and column 74, lines 1-14), and wherein the at least one of a partition and file can be configured by the network provider to provide the client modifiable access to the portion of the one of the one or more devices (column 63, lines 5-25 and column 74, lines 1-14).

9.   Regarding claims 6 and 20, Lamb disclosed an act of providing client access to one or more of a port (column 63, lines 60-67 and column 59, lines 1-12), a WWN (column 31, lines 55-65), and a portal through the protocol-independent port driver (column 59, lines 5-15), such that the protocol-independent port driver is accessed through one or more protocol-dependent mini-ports (column 63, lines 60-67 and column 59, lines 5-15).

10.   Regarding claims 7 and 21, Lamb disclosed wherein the protocol-independent port driver and one or more protocol-dependent mini-port drivers are managed by the centralized service (column 63, lines 60-67 and column 59, lines 5-15), and wherein the one or more protocol-dependent miniport drivers plug-in to the protocol-independent port driver (column 63, lines 60-67 and column 59, lines 5-15).

11.   Regarding claims 10 and 24, Lamb disclosed wherein the virtual SCSI device is a storage device (column 45, lines 4-20), and the network comprises a storage area network (column 45, lines 4-20).

12.   Regarding claims 11 and 25, Lamb disclosed wherein the storage device is one or more of an internal or external magnetic storage medium, an optical storage medium, and a tape backup drive (column 63, lines 60-67 and column 59, lines 1-12).

13.   Regarding claims 12 and 26, Lamb disclosed wherein the network provider manages one or more targets, one or more drivers, and authentication information for one or more clients through a centralized directory service (column 63, lines 60-67 and column 59, lines 1-12).

14.   Regarding claims 13 and 27, Lamb disclosed wherein the network device identifier is identified by a target name and a LUN that has been assigned to the at least one device by the centralized directory service (column 63, lines 60-67 and column 59, lines 1-12).

15.   Regarding claims 14 and 28, Lamb disclosed wherein the logical unit number refers to one or more of a device, a plug-and-play identifier for a device (abstract), a global unique identifier for a device; a device driver that interfaces with a device (column 63, lines 60-67 and column 59, lines 5-15); and at least one of a partition and file that represents a portion of a device (column 63, lines 5-25 and column 74, lines 1-14).

16.   Regarding claim 29, Lamb disclosed an act of identifying a set of the one or more partitions or files representing portions of devices that can be accessed locally or over a network (column 3, lines 16-30 and column 63, lines 60-67, Fig. 1); an act of generating a target that identifies a set of the one or more devices (column 3, lines 16-30 and column 63, lines 60-67), and that includes at least one corresponding device identifier (column 3, lines 16-30 and column 63, lines 60-67); an act of associating client authorization information identified by the network provider with the target that identifies the of the one or more devices (column 3, lines 42-50 and column 63, lines 60-67).

However, Lamb does not explicitly teach wherein the set of one or more devices

is identified based on each of the devices having at least one common group of clients,

the set being based on one or more partitions or files having commonly authorized client

access and consisting of only partitions or files to which the client has been assigned

and to which the client is to be provided access. Iwami teaches wherein the set of one

or more devices is identified based on each of the devices having at least one common

group of clients (paragraphs 0038-0039, 0041 and Fig. 3), the set being based on one

or more partitions or files having commonly authorized client access and consisting of

only partitions or files to which the client has been assigned and to which the client is to

be provided access (paragraphs 0038-0039, 0041 and Fig. 3). It would have been

obvious to one of ordinary skill in the art at the time of the invention to include the

features as taught by Iwami in the system of Lamb because both are from the same

field of endeavor and in order to allow a storage server provider to provide restricted

access to storage resources to only authorized users or group of users (paragraph

0015, e.g. users from the same company).

However, the Lamb-Iwami combination does not explicitly teach a step for

dynamically exposing the set of the one or more partitions or files to the client through a

specific one of a dynamically assigned network port, a WWN, and a portal, such that the

client can access the set of the one or more partitions or files identified by the target

when the client has access to the specific one of a dynamically assigned network port, a

WWN, and portal, and when the client presents the associated client authorization to

the network provider.

Thrasher teaches a step for dynamically exposing the set of the one or more

partitions or files to the client through a specific one of a dynamically assigned network

port, a WWN, and a portal (column 11, lines 27-60 and Fig. 6), such that the client can

access the set of the one or more partitions or files identified by the target when the

client has access to the specific one of a dynamically assigned network port, a WWN,

and portal (column 11, lines 27-60 and Fig. 6), and when the client presents the

associated client authorization to the network provider (column 11, lines 27-60 and Fig.

6).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to include the features as taught by Thrasher in the Lamb-Iwami combination

because all are from the same field of endeavor and in order to "proactively identify

bottlenecks and to reconfigure SAN pathing on the fly to improve the flow of data

through the SAN" (column 1, lines 65 – column 2, line 3).

17.   Regarding claim 30, Lamb disclosed an act of assigning the target to a port

through a protocol-independent port driver at the network provider (column 63, lines 60-

67 and column 59, lines 5-15); and an act of providing client access to the specific one

of a port, a WWN, and a portal through the protocol independent port driver (column 63,

lines 60-67 and column 59, lines 5-15), such that the protocol-independent port driver is

accessed through one or more protocol-dependent mini-ports (column 63, lines 60-67

and column 59, lines 5-15).

18.   Regarding claim 31, Lamb disclosed wherein the client is provided access to the

specific one of a port, a WWN (column 63, lines 60-67 and column 59, lines 5-15), and

a portal by virtue of being authenticated at one or more of a local centralized service

provider, and a remote authentication database (column 63, lines 60-67 and column 59,

lines 5-15).

19.   Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Lamb (6,892,264) in view of Iwami, in view of Thrasher, further in view of Kuik

(7,165,258).

20.   Regarding claims 9 and 23, Lamb disclosed wherein the at least one device is a

virtual SCSI device (column 63, lines 60-67 and column 59, lines 5-15). However the

combination above does not explicitly teach that the device can be accessed through an

iSCSI protocol. Kuik teaches using the iSCSI protocol to access a device (column 5,

lines 10-25). It would have been obvious to one of ordinary skill in the art at the time of

the invention to include the use of the iSCSI protocol as taught by Kuik in the

combination above because all are from the same field of endeavor of storage area

networks and in order to map the SCSI model over the TCP model (column 5, lines 20-

25).

21.   Claims 32, 33, and 35-37 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lamb (6,892,264) in view of Iwami, in view of Thrasher, further in

view of Chadalapaka (6,845,403).

22.   Regarding claim 32, Lamb disclosed an act of identifying a one or more device

identifiers corresponding to one or more partitions or files representing storage devices

on a storage service provider (column 3, lines 16-30 and column 63, lines 60-67, Fig. 1),

wherein the partitions of files allow access to portions of the storage devices and enable

a first device type to emulate a second device type (column 63, lines 5-25 and column

74, lines 1-14),

an act of receiving from a centralized directory service a modifiable client

resource that identifies client authorization to access the storage device (column 3, lines

42-50 and column 63, lines 60-67), and a portion of the storage device that the client

can access (column 3, lines 42-50 and column 63, lines 60-67),

wherein the centralized directory maintains authentication information for the

client, and at least one of a work group identity, network location (column 3, lines 42-50

and column 63, lines 60-67), and physical location, and further maintains configuration

information defining how the client accesses a partition or file representing a storage

device (column 3, lines 42-50 and column 63, lines 60-67);

an act of creating a target containing one or more logical unit numbers that have

been assigned to the identified device identifiers (column 63, lines 60-67 and column

59, lines 1-12), wherein access to the target is provided according to the modifiable

client resource (column 3, lines 42-50 and column 63, lines 60-67);

an act of providing the client computer access to the file or partition representing

the storage device identified by the target through a client-restricted port on the storage

service provider (column 3, lines 42-50 and column 63, lines 60-67), such that if the

client has knowledge of, access to, the client-restricted port (column 3, lines 42-50 and

column 63, lines 60-67), the client can access the storage device by providing the

storage service provider with client authorization (column 3, lines 42-50 and column 63, lines 60-67).

However, Lamb does not explicitly teach wherein the centralized directory maintains authentication information for the client, and at least one of a work group identity, network location, and physical location, and further maintains configuration information defining how the client accesses a partition or file representing a storage device.

Iwami teaches wherein the centralized directory maintains authentication information for the client, and at least one of a work group identity, network location (paragraphs 0038-0039, 0041 and Fig. 3), and physical location (paragraphs 0038-0039, 0041 and Fig. 3), and further maintains configuration information defining how the client accesses a partition or file representing a storage device (paragraphs 0038-0039, 0041 and Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Iwami in the system of Lamb because both are from the same field of endeavor and in order to allow a storage server provider to provide restricted access to storage resources to only authorized users or group of users (paragraph 0015, e.g. users from the same company).

However, the Lamb-Iwami combination does not explicitly teach wherein the client restricted port is dynamically assigned by the centralized directory service based on the storage service provider, wherein the client restricted port is dynamically

assigned by the centralized directory service based on storage service provider load balancing and failover protection.

Thrasher teaches wherein the client restricted port is dynamically assigned by the centralized directory service based on the storage service provider (column 11, lines 27-60 and Fig. 6), wherein the client restricted port is dynamically assigned by the centralized directory service based on storage service provider load balancing and failover protection (column 11, lines 27-60 and Fig. 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Thrasher in the Lamb-Iwami combination because all are from the same field of endeavor and in order to "proactively identify bottlenecks and to reconfigure SAN pathing on the fly to improve the flow of data through the SAN" (column 1, lines 65 – column 2, line 3).

However, the Lamb-Iwami-Thrasher combination does not explicitly teach providing access with a Uniform Resource Locator including the assigned port number. Chadalapaka teaches providing access with a Uniform Resource Locator including the assigned port number (column 9, lines 20-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Chadalapaka in the Lamb-Iwami-Thrasher combination because all are from the same field of endeavor and in order to "enable simple devices to operate without name-to-address conversion services" (column 9, lines 40-45).

23.   Regarding claim 33, Lamb disclosed wherein centralized directory service

receives client access information from at least one of a local and remote database

(column 37, lines 2-15).

24.   Regarding claim 35, Lamb disclosed wherein the client-restricted port is

managed by the centralized service and a protocol-independent port driver that receives

network traffic through one or more protocol-dependent mini-port drivers (column 63,

lines 60-67 and column 59, lines 5-15).

25.   Regarding claim 36, Lamb disclosed wherein the one or more protocol-

dependent mini-port drivers are plug-ins to the protocol-independent port driver (column

63, lines 60-67 and column 59, lines 5-15).

26.   Regarding claim 37, Lamb disclosed wherein at least one of the one or more

mini-port drivers communicates through one or more of an Ethernet, Token Ring, USB,

fiber channel, or wireless connection protocol (column 2, lines 50-60 and column 22,

lines 30-46).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BRADFORD F. FRITZ whose telephone number is

(571)272-3860. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2442

/B. F. F./
Examiner, Art Unit 2442